

What is claimed is:

CLAIMS

1

1. A protein having a molecular weight of about 24kD and capable of specifically binding to a protein of hepatitis C virus, or a functionally equivalent variant or fragment thereof.

2. A protein or a functionally equivalent variant or fragment thereof according to claim 1 which is functionally unglycosylated.

3. A protein or a functionally equivalent variant or fragment thereof according to claim 1 or 2 wherein the protein is a transmembrane protein.

4. A process for the preparation of a protein or a functionally equivalent variant or fragment thereof according to any one of claims 1 to 3 comprising the step of culturing cells exhibiting binding to an HCV protein and purifying from a cell preparation a protein according to any one of claims 1 to 3.

5. A process according to claim 4 wherein the cell preparation is a plasma cell membrane preparation.

6. A process according to claim 4 or 5 wherein the cells are selected and cloned to provide hyperexpression of the protein according to any one of claims 1 to 3.

7. A process according to any one of claims 4 to 6 wherein the cell preparation is subjected to an ammonium sulphate precipitation purification step employing ammonium sulphate at between 33 and 50%

8. A process according to any one of claims 4 to 7 wherein the purification involves at least one step of hydrophobic interaction chromatography.

090119102199

15

20

25

30

35

40

9. A process according to any one of claims 4 to 8 wherein the process involves at least one step of acetone precipitation
- 5 10. A process according to any one of claims 4 to 8 wherein comprising the steps of:
- Sub. G2
- 10 i) preparing a plasma cell membrane preparation of mammalian cells selected for hyperexpression of the 24kd protein of the invention,
- 15 ii) subjecting the preparation to ammonium sulphate precipitation at less than 33% saturation and retaining the supernatant,
- 20 iii) subjecting the supernatant to ammonium sulphate precipitation at between 33 and 50% saturation and retaining the precipitate, and
- iv) resuspending the precipitate and subjecting it to hydrophobic interaction chromatography
11. A method for treating an infection of HCV comprising administering to a patient an amount of a protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof effective to reduce the infectivity of the virus.
- 25 12. A pharmaceutical composition comprising a protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof, optionally as a pharmaceutically acceptable salt, in combination with a pharmaceutically acceptable carrier.
- 30 13. A process for preparing a pharmaceutical composition, in which a protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment

thereof is brought into association with a pharmaceutically acceptable carrier.

14. A protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof for use as a pharmaceutical.
15. ~~Use of a protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof in the manufacture of a medicament for the treatment of an HCV infection.~~
16. ~~An assay for HCV antibodies in a serum sample comprising the step of allowing competitive binding between antibodies in the sample and a known amount of an HCV protein for binding to a protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof and measuring the amount of the known HCV protein bound~~
17. ~~A diagnostic kit comprising the protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof.~~
18. ~~A method for screening chemical compounds for ability to bind to the region of HCV responsible for binding to a host cell, comprising measuring the binding of a chemical compound to be screened to a protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof.~~
19. A transgenic non-human mammal, carrying a transgene encoding a protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof.
20. A process for producing a transgenic animal comprising the step of introducing a DNA encoding a

0901910-0161060

20

25

30

35

protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof into the embryo of a non-human mammal, preferably a mouse.

5

*add G47*09011910-021798
862120-01611060